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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/022,228	12/20/2001	Atsushi Yamaguchi	111476	4214

25944 7590 09/20/2002

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EXAMINER

NGUYEN, HUNG

ART UNIT PAPER NUMBER

2851

DATE MAILED: 09/20/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/022,228

Applicant(s)

YAMAGUCHI ET AL.

Examiner

Hung Henry V Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 December 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "sensor which detects information relating to a capability of ...to hold said mask" (see claim 7) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1,6, 8, 9, 13-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Saeki (JP-408124843A).

With regard to claims 1, 6, 9, Saeki (fig.1) discloses a scanning exposure apparatus for exposing a pattern formed on a reticle onto a substrate and comprising all basic features of the instant claims such as: a reticle stage (2A) for holding a reticle, an acceleration measuring means (21) for detecting the acceleration of the reticle stage, a control device (23) for controlling the movement of the stage in accordance with the detected output of the acceleration measuring

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means so that the acceleration of the stage is within a predetermined range and thus offset will not occur in the reticle.

Method claims 13-15 are seen to be inherent teachings in existence of the above apparatus.

4. Claims 1,6, 8, 9, 13-15 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Wakui (U.S.Pat. 5,900,707).

With respect to claims 1, 6, 8, 9 and 13-15, Wakui teaches an exposure apparatus comprising all of the limitations of the instant claims including sensor for detecting the acceleration of the reticle stage and controller for controlling the acceleration of the stage based on the detected information (see fig.1).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2-7, 9-12, 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saeki (JP-408124843A) or Wakui (U.S.Pat. 5,900,707) in view of Sato (U.S.Pat. 5,753,926).

With respect to claims 2-6, 9-12, 16-17, Saeki or Wakui discloses a scanning exposure apparatus comprising substantially all limitations of the instant claims as discussed. Saeki/ or Wakui does not expressly disclose a well known structure in the art for detecting a posture of the

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reticle on the stage. Sato teaches an scanning exposure apparatus having a reticle image plane detection and reticle alignment scope for detecting a posture of the reticle on the stage (see figs.1-2 of Sato and col.6, line 50 to col.7, line 30) and further teaches memories devices (50,53,56) for storing the information regarding the speed/acceleration of the reticle stage and CPU (70) for controlling the positional relationship between the reticle stage and wafer stage. It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Saeki/or Wakui and Sato to obtain the invention as specified in claims 2-3. It would have been obvious to a skilled artisan to utilize the posture detection device as taught by Sato into the scanning exposure apparatus of Saeki/or Wakui for the purpose of detecting the posture of the reticle and whereby the positional deviation between the reticle and the substrate can be adjusted properly and the quality of the images to be printed can be improved. Further, in view of the teachings of Saeki/or Wakui and Sato, it would have been obvious to perform a process of notifying the operator in case an offset has occurred/judged in the reticle.

As to claims 7, and 18-19, Saeki/or Wakui as modified by Sato lacks to show a sensor for detecting the holding capability of the mask stage. It is the Examiner's position that it would have been obvious to one having ordinary skill in the art to employ a sensor for detecting the information regarding capability of the stage to hold the mask so that the acceleration of the mask stage can be controlled accurately in accordance with the detected information.

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Prior Art Made of Record

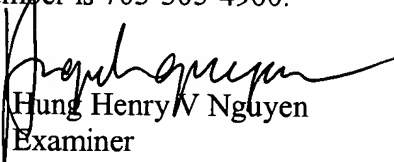
7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Korenaga (U.S.Pat. 6,426,788), Makinouchi et al (U.S.Pat. 6,259,511), Akimoto et al (U.S.Pat. 6,359,688) teaches exposure apparatus, each of which comprises substantially all elements as recited in the instant application.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Henry V Nguyen whose telephone number is 703-305-6462. The examiner can normally be reached on Monday-Friday (First Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russ Adams can be reached on 703-308-2847. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7723 for regular communications and 703-305-7723 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4900.


Hung Henry V Nguyen
Examiner
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hvn
September 17, 2002